

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-25 (Canceled).

Claim 26 (Currently Amended): A method for aiding product life cycle planning, comprising:

setting a threshold value concerning reuse of parts with respect to cost and environment;

reading cost of parts and environment load information from a database;

displaying parts on a map displayed on a display device and divided into a plurality of domains based on the threshold;

selecting reuse candidate parts from the displayed parts with reference to the displayed map;

calculating a useful life based condition formula ~~for determining that parts is possible to reuse only in the case where a remaining useful life of parts j to be included in a reuse source product remains more than a use period of reuse destination product i even if the use product of reuse source product is elapsed~~ expressed as follows:

$$\min \{la^{-i}, lr^{-i}\} \leq la^{-j} - \min \{la^{-i}, lr^{-i}\}$$

where la^{-i} is a useful life time of product i , lr^{-i} is a worth life time of product i , la^{-j} is a useful life time of part j , and lr^{-j} is a worth life time of part j ,

determining whether the useful life based condition formula is satisfied; and

determining possibility of reuse with respect to the reuse candidate parts when the useful life based condition formula is satisfied;

calculating a worth life time based condition formula expressed as follows:

$$tL^i + tP^i + \min \{la^{-i}, lr^{-i}\} \leq lr^{-j}$$

where tL^i is a time lag of product i' , and tP^i is a production period of product i' , la^{-i} is a useful life time of product i' , lr^{-i} is a worth life time of product i' , and lr^{-j} is a worth life time of part j .

determining whether the worth life time based condition formula is satisfied; and
determining possibility of reuse with respect to the reuse candidate parts when the
worth life time based condition formula is satisfied;

calculating a recovery quantity based condition formula expressed as follows:

$$\min \{la^{-i}, lr^{-i}\} < tL^i + \alpha tP^i$$

where $0 \leq \alpha \leq 1$, la^{-i} is a useful life time of product i' , lr^{-i} is a worth life time of product i' , tL^i is a time lag of product i' , and tP^i is a production period of product i'

determining whether the recovery quantity based condition formula is satisfied; and
determining possibility of reuse with respect to the reuse candidate parts when the
recovery quantity based condition formula is satisfied.

Claim 27 (Previously Presented): The method according to claim 26, wherein the map is divided into four domains: a domain where reuse should be actively examined, a domain where reuse should be fairly actively examined, a domain which fails to be suitable for reuse and a domain where reuse is examined.

Claims 28-29 (Canceled).

Claim 30 (Currently Amended): An apparatus of aiding product life cycle planning, comprising:

an input device configured to set a threshold value concerning reuse of parts with respect to cost and environment;

a reading device configured to read cost of parts and environment load information from a database;

a display device configured to display parts on a map divided into a plurality of domains based on the threshold;

a selecting device configured to select reuse candidate parts from the displayed parts with reference to the displayed map;

a computing device configured to calculate a useful life based condition formula for determining that parts is possible to reuse only in the case where a remaining useful life of parts j to be included in a reuse source product remains more than a use period of reuse destination product i' even if the use product of reuse source product is elapsed expressed as follows:

$$\min \{la^{\sim i'}, lr^{\sim i'}\} \leq la^{\sim j} - \min \{la^{\sim i}, lr^{\sim i}\}$$

where $la^{\sim i'}$ is a useful life time of product i' , $lr^{\sim i'}$ is a worth life time of product i' , $la^{\sim j}$ is a useful life time of part j , and $lr^{\sim j}$ is a worth life time of part j ,

a first determining unit configured to determine whether the useful life based condition formula is satisfied;

a second determining unit configured to determine possibility of reuse with respect to the reuse candidate parts when the useful life based condition formula is satisfied;

the computing device calculates a worth life time based condition formula expressed as follows:

$$tL^i + tP^i + \min \{la^{\sim i}, lr^{\sim i}\} \leq lr^{\sim j}$$

where tL^i is a time lag of product i , and tP^i is a production period of product i , $la^{\sim i}$ is a useful life time of product i , $lr^{\sim i}$ is a worth life time of product i , and $lr^{\sim j}$ is a worth life time of part j .

the first determining unit determines whether the worth life time based condition formula is satisfied; and

the second determining unit determines possibility of reuse with respect to the reuse candidate parts when the worth life time based condition formula is satisfied;

the computing unit calculates a recovery quantity based condition formula expressed as follows:

$$\min \{la^{-i}, lr^{-i}\} < tL^i + \alpha tP^i$$

where $0 \leq \alpha \leq 1$, la^{-i} is a useful life time of product i' , lr^{-i} is a worth life time of product i' , tL^i is a time lag of product i' , and tP^i is a production period of product i' ;

the first determining unit determines whether the worth life time based condition formula is satisfied; and

the second determining unit determines possibility of reuse with respect to the reuse candidate parts when the recovery quantity based condition formula is satisfied.

Claim 31 (Previously Presented): The apparatus according to claim 30, wherein the map is divided into four domains: a domain, where reuse should be actively examined, a domain where reuse should be fairly actively examined, a domain which fails to be suitable for reuse and a domain where reuse is examined.

Claims 32 and 33 (Canceled).

Claim 34 (Currently Amended): A computer readable recording medium containing a computer program to aide product life cycle planning, the program comprising instructions to:

set a threshold value concerning reuse of parts with respect to cost and environment;

read cost of parts and environment load information from a database;

display parts on a map divided into a plurality of domains based on the threshold;

receive a selection of reuse candidate parts from the displayed parts with reference to the displayed map;

calculate a useful life based condition formula ~~for determining that parts are possible to reuse only in the case where a remaining useful life of parts j to be included in a reuse source product remains more than a use period of reuse destination product i' even if the use period of the reuse source product i is elapsed; expressed as follows:~~

$$\min \{la^{-i'}, lr^{-i'}\} \leq la^{-j} - \min \{la^{-i}, lr^{-i}\}$$

where $la^{-i'}$ is a useful life time of product i' , $lr^{-i'}$ is a worth life time of product i' , la^{-j} is a useful life time of part j , and lr^{-j} is a worth life time of part j .

determine whether the useful life based condition formula is satisfied; and

determine possibility of reuse with respect to the reuse candidate parts when the useful life based condition formula is satisfied;

calculate a worth life time based condition formula expressed as follows:

$$tL^{i'} + tP^{i'} + \min \{la^{-i'}, lr^{-i'}\} \leq lr^{-j}$$

where $tL^{i'}$ is a time lag of product i' , and $tP^{i'}$ is a production period of product i' , $la^{-i'}$ is a useful life time of product i' , $lr^{-i'}$ is a worth life time of product i' , and lr^{-j} is a worth life time of part j .

determine whether the useful life based condition formula is satisfied;

determine possibility of reuse with respect to the reuse candidate parts when the useful life based condition formula is satisfied;

calculate a recovery quantity based condition formula expressed as follows:

$$\min \{la^{-i'}, lr^{-i'}\} < tL^{i'} + \alpha tP^{i'}$$

where $0 \leq \alpha \leq 1$, $la^{~i}$ is a useful life time of product i', $lr^{~i'}$ is a worth life time of product i', $tL^{~i'}$ is a time lag of product i', and $tP^{~i'}$ is a production period of product i';
determine whether the worth life time based condition formulation is satisfied; and
determine possibility of reuse with respect to the reuse candidate parts when the
recovery quantity based condition formula is satisfied.

Claim 35 (Previously Presented): The program according to Claim 34, wherein the map is divided into four domains: a domain where reuse should be actively examined, a domain where reuse should be fairly actively examined, a domain which fails to be suitable for reuse and a domain where reuse is examined.

Claims 36 and 37 (Canceled).